REMARKS

The present response is being submitted in reply to the Office action issued on November 1, 2007. The Applicant thanks the Examiner for the acceptance of the inventor's declaration, the withdrawal of the objection to the specification, the withdrawal of the rejection of the claims under 35 U.S.C. 112, second paragraph, the withdrawal of the rejection of claims 3-6 and 25 as being anticipated by Walt, et al., the withdrawal of the rejection of claim 7 as being anticipated by Walt, et al. in view of Schwarzberg and the withdrawal of the rejection of claim 28 as being unpatentable over Walt, et al. in view of Mueller-Schulte and further in view of Tom-Moy, et al. Regarding the additional prior art pages noted in the Information Disclosure Statement, the Applicant is still obtaining those pages and will submit them to the Examiner as soon as possible.

Claims 1-19, 21-23 and 25-32 are pending in this application. Claims 8-13, 29 and 32 have been withdrawn from consideration and claims 1-7, 14-19, 21-23, 25-28, 30 and 31 are under consideration for their merits and have been rejected. By the present response, claims 1, 2, 4, 8-13, 15, 19, 21 and 31 have been amended to comply with the allowed claims set forth in the corresponding allowed European application and/or have been amended in a non-substantive manner to clarify various informalities. The present amendments of the claims are supported throughout the present specification and no new matter has been added. Reconsideration is respectfully requested in light of the amendments being made hereby and of the following remarks.

Objection to the Claims

Claims 15 and 25 have been objected to because the term "luminescent polymer particles" in line 1 of claim 15 should be corrected to read "luminescent silica particles." Claim 15 has been amended accordingly. It is believed that claim 25 is sufficient in its present form. Withdrawal of this objection is respectfully requested.

Rejection of claims 15-18, 28 and 30 under 35 U.S.C. 112, second paragraph

Claims 15-18, 28 and 30 have been rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. In particular, the Examiner states that the phrase "further comprising a magnetic colloid" in claim 15 is vague and indefinite and it is unclear whether or not the term "a magnetic colloid" of claim 15 is referring to "a magnetic colloid" at line 10 of claim 1. The Examiner has interpreted the term "a magnetic colloid" of claim 15 has being the same as the term "a magnetic colloid" of claim 1 since the specification teaches that silica particles comprise encapsulated magnetic colloids and does not teach any additional magnetic colloids further comprising the silica particles (specification paragraphs [000058], [000060]). Claim 15 has been amended to clarify this limitation. Withdrawal of this rejection is respectfully requested.

Rejection of Claims 1 and 2 under 35 U.S.C. 102(b)

Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. US 2001/0029049 (Walt, et al.). The Examiner argues in the Office action that the Walt, et al. reference anticipates the instant claims by teaching spherical luminescent silica gel particles (entire document) containing a transparent silica

gel matrix (page 7, paragraph [0077]), the transparent silica gel matrix having at least one luminescent substance (page 9, paragraph [0085]), the size of the particle being at least 0.5 μm (page 9, paragraph [0089]). The Examiner further states that with respect to claim 2, Walt, et al. teach a luminescent silica gel particles which include fluorescein (page 8, paragraph [0081]) which would not be auto-fluorescent.

The Applicant now respectfully refers to MPEP §706.02(b), which provides that a rejection based on 35 U.S.C. 102(b) can be overcome by:

(a) Persuasively arguing that the claims are patentably distinguishable from the prior art;

(b) Amending the claims to patentably distinguish over the prior art; or

(c) Perfecting priority under 35 U.S.C. 119(e) or 120 by amending the specification of the application to contain a specific reference to a prior application or by filing an application data sheet which contains a specific reference to a prior application in accordance with 37 CFR 1.78(a).

The Applicant provides herewith a brief summary of the presently claimed invention for ease of discussion. In particular, the present invention refers to luminescent silica gel particles and a process for preparing luminescent silica gel particles. The luminescent silica gel particles exhibit a transparent silica gel matrix containing at least one luminescent compound whereas the particles comprise a particular size, luminescent compound, magnetic colloid and functional groups in the silica gel matrix. The particle size is between 0.5 to 50 μm (paragraph [000052]). The luminescent compound

according to the present invention are luminescent markers (claim 1), (paragraph [000054]), nanocrystals (paragraph [000054]), semiconductors from the group IV/A (paragraph [000054]), up-converting phosphors (paragraph [000055]) and luminescent proteins ([paragraph 000056]). The magnetic colloids are discussed, for example, at paragraph [000060]. The equipment of the silica gel matrix with functional groups with which biomolecules can be coupled is disclosed at paragraph [000067].

The Applicant respectfully submits that the present invention is patentably distinct from the invention disclosed in the cited prior art reference. Specifically, each and every feature of the present invention as recited in the present claims are not taught or disclosed in Walt, et al., and therefore the reference clearly does not anticipate the present invention. Moreover, it would not be obvious to one skilled in the art to have amended the invention as set forth in Walt, et al. to incorporate the features of the present invention as set forth in the presently rejected claims.

The subject of Walt, et al. is a microsphere-based analytic chemistry system wherein self-encoding microspheres having distinct characteristic optical response signatures are used. Paragraph [0077] of Walt, et al. discloses that the silica beads are adapted with a variety of bonded phases for use in phenomenex (i.e., chromatography) columns. At line 21 of paragraph [0077] (page 8), the reference states that porous silica beads are disclosed which will be treated with silanization. However, the Applicant respectfully disagrees with the Examiner's position on the teaching of Walt, et al. and submits that the reference discloses different silica particles which are not transparent.

Moreover, the Examiner also argues in the Office action that at paragraph [0081], Walt, et al. disclose a fiber optic sensor array system in which fluorescein as a chemical dye indicator is incorporated. In contrast thereto, the present invention comprises the luminescence particles – such as fluorescein – are incorporated in the silica gel matrix.

In addition, the size of the beads of Walt, et al. is disclosed in a wide range, including 100 nm to 1 mm, 0.2 micron to about 200 microns being preferred, and 0.5 to about 5 micron being particularly preferred – or even smaller beads. However, in contrast thereto, the particle size according to the presently claimed invention is a significant election characteristic for the silica gel particles of the present invention. It is respectfully submitted that in order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, and the reference teaches a broad range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. (M.P.E.P. Section 2131.03(II), citing Atofina v. Great Lakes Chem. Corp., 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006), wherein the court held that a reference temperature range of 100-500 degrees C did not describe the claimed range of 330-450 degrees C with sufficient specificity to be anticipatory. Therefore, it is respectfully submitted that the cited prior art fails to anticipate the present claims, in particular present claim 1.

Still further, the Applicant respectfully submits, with reference to paragraph [0085] of Walt, et al., that the dyes of Walt, et al. are covalently bonded with the beads. In contrast thereto, the luminescent compounds of the invention are encapsulated in the transparent matrix of the silica gel.

In summary, it is submitted that Walt, et al. fails to teach or disclose each and every limitation of present claims 1 and 2, namely, transparent luminescent silica gel particles, fluorescein encapsulated in the silica gel matrix and the significance of the selection of the particle size in accordance with the presently claimed invention. Therefore, because each and every feature of the present invention as recited in claims 1-6 and 25 are not taught or disclosed in Walt, et al., the Applicant submits that the reference does not anticipate the present invention. It is respectfully requested that this rejection be withdrawn.

Rejection of Claims 3-6, 7, 14-19, 21-23, 25-28, 30 and 31 under 35 U.S.C. 103(a)

Claims 3-6, 14, 25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of Chen, et al. (*Chem. Mater.*, 1995, Vol. 7, pp. 1779-1783). The Examiner argues in the Office action (pages 8-14) that Walt, et al. teach luminescent silica gel particles (as discussed in view of claims 1 and 2, above) and further teach a sensor array comprising luminescent silica gel particles and that a variety of fluorescent dyes can be employed to optically encode silica gel particles. With respect to claim 6, the Examiner states that Walt, et al. teach that any two of the luminescent substances display different emission frequencies. With respect to claim 25, the

Examiner states that Walt, et al. teaches a sensor array comprising luminescent silica gel particles containing a transparent silica gel matrix having at least one luminescent substance and that the sensor array of Walt, et al. meets all the structural limitations of claim 25 and would therefore be capable of performing the intended use of "analysis, diagnostic testing of nucleic acids, nucleic acid fragments, proteins, peptides, antibodies, antibody fragments, cells, cell receptors, and biotinylated biomolecules and testing protein or nucleic acid libraries." However, the Examiner acknowledges that Walt, et al. fail to teach luminescent silica gel particles wherein the luminescent substance is a luminescent protein. The Examiner refers to Chen, et al. for teaching the missing limitations of Walt, et al., namely, a method of making optically transparent biomaterial using sol-gel encapsulation method in which fluorescent proteins, such as phycobiliproteins, are added to a silica gel, that the luminescent protein is encapsulated in silica particles and the luminescent substance displays fluorescence. The Examiner therefore concludes that it would have been obvious to one of ordinary skill in the art to employ the sol-gel encapsulation method of Chen, et al., in which fluorescent proteins, such as phycobiliproteins, are added to a silica sol, in order to produce optically encoded silica particles of Walt, et al. The Examiner further argues that the advantage of optically encoding silica particles which exhibit characteristic, i.e., unique, optical signature to a reference analyte, provides the motivation to combine teachings of Walt, et al. and Chen, et al. with a reasonable expectation of success as optically encoded silica particles (luminescent silica particles) with unique, optical signature can be conveniently decoded for identification of reference analyte for use in biochemical assays. Further, the

Examiner argues that it would have been obvious to select a fluorescent (luminescent) protein as a fluorescent dye, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of suitability for the intended use as a matter of design choice. Thus, the Examiner concludes that it would have been obvious to employ fluorescent proteins as the fluorescent dyes in the instant claims.

Regarding claim 5, the Examiner states that it is no more than routine experimentation for one of ordinary skill in the art to discover an optimum value for a result effective variable and that the present specification does not disclose that the specifically claimed range(s) of "1 to 10%-wt concentration of the luminescent substance" is for any particular purpose or to solve any stated problem that distinguishes it from the other disclosed ranges, and thus there is no criticality of this claimed range. In addition, the Examiner argues that on obviousness rejection based upon optimization must rely on prior art that discloses the optimized parameter is a result-effective variable. The Examiner thus concludes that since Walt, et al. teach that varying concentrations of luminescent substance can be used to produce luminescent silica gel particles, the prior art therefore provides teaching that the concentration of luminescent substance is a variable that achieves a recognized result and satisfies the aforementioned requirement of a result-effective variable in order to set forth an obviousness rejection based on optimization.

Regarding claim 31, the Examiner states that Walt, et al. in view of Chen, et al. teach the spherical luminescent silica gel particles, as noted above. The Examiner concludes that since the spherical luminescent silica gel particles of Walt, et al.

reasonably appear to be either identical with or only slightly different than a product claimed in a product-by-process claim, the spherical luminescent silica gel particles of Walt, et al. anticipates the spherical luminescent silica gel particles set forth in present claim 31.

Claim 7 has been rejected as being unpatentable over Walt, et al. in view of Chen, et al. and in light of Tijoe, et al. The Examiner argues in the Office action (pages 14-15) that Walt, et al. teach luminescent silica gel particles, as discussed in view of claims 1 and 2 above, and further teach a sensor array comprising luminescent silica gel particles and that a variety of fluorescent dyes can be employed to optically encode silica gel particles. However, the Examiner acknowledges that Walt, et al. fail to teach luminescent silica gel particles, wherein the luminescent substance is a luminescent protein. The Examiner further states that Chen, et al. teach a method of making optically transparent biomaterial using sol-gel encapsulation method in which fluorescent proteins, such as phycobiliproteins, are added to a silica sol. Therefore, the Examiner concludes that it would have been obvious to one having ordinary skill in the art to employ the sol-gel encapsulation method of Chen, et al. in which fluorescent proteins such as phycobiliproteins are added to a silica sol in order to produce optically encoded silica particles of Walt, et al.

The Examiner proceeds to state that although Walt, et al. in view of Chen, et al. is silent on disclosing that PE or APC has an excitation frequency higher than the emission frequency, luminescent proteins, such as PE or APC of Walt, et al. in view of Chen, et al., intrinsically have an excitation frequency higher than the emission frequency as

evidenced by Tijoe, et al. The Examiner further states that Tijoe, et al. teach that PE has an excitation wavelength of 488 nm and emission wavelength of 575 nm and that APC has an excitation wavelength of 575 nm or 647 nm and emission wavelength of 660 nm.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of WO 02/09125 (Mueller-Schulte). The Examiner argues in the Office action (pages 15-17) that Walt, et al. teaches luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above) and that the particles (beads) encoded with one or more reporter dyes exhibit characteristic, i.e., unique, optical signature to a reference analyte (page 4, paragraph [0050]). As a result, the individual sensor elements of the array are conveniently decoded simultaneously in one simple measurement (page 4, paragraph [0050]). However, the Examiner acknowledges that Walt, et al. fail to teach luminescent silica gel particles further comprising a magnetic colloid.

The Examiner refers to Mueller-Schulte for teaching producing magnetic SiO_2 particles comprising the steps of a) alkoxysilanes are dispersed in water, acid-catalytically hydrolyzed and condensed to form an SiO_2 hydrosol; b) a magnetic particle-sol mixture is produced by adding magnetic particles, for example, usual magnetic particles, magnetic colloids and/or ferrofluids to the SiO_2 hydrosol; c) dispensing the magnetic particle-sol mixture in an organic solvent which is immiscible with water; and d) adding a base to the magnetic particle-sol mixture during or after the dispersion in the organic solvent in order to form a gel (Abstract). The magnetic SiO_2 particles of Muller-Schulte can be used in a variety of biochemical applications, including magnetic separation assays (page 17 of

machine translated document).

With respect to claim 16, the Examiner states that Muller-Schulte teaches that magnetic colloid is ferrofluids (page 6, last paragraph of the reference).

With respect to claim 17, the Examiner states that magnetic colloid is present in a concentration of 10-50% by weight relative to the polymer particle (claim 69 of the reference).

Therefore, the Examiner concludes that it would have been obvious to employ the magnetic SiO_2 particle of Muller-Schulte in the optical chemical array sensor system of Walt, et al. to use the optically encoded luminescent silica gel particles in a variety of biochemical applications including magnetic separation assays.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of Mueller-Schulte as applied to claim 15 and further in light of U.S. Patent No. 6,270,965 (Kleiber, et al.). The Examiner argues in the Office action (pages 17-18) in this instance that Walt, et al. in view of Muller-Schulte teaches luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above) and that Walt, et al. further teaches that a variety of functional groups, such as aldehydes (page 12, Table 1 and paragraph [0108]), can be attached to the particles for adding bioactive agents. However, the Examiner acknowledges that Walt, et al. in view of Muller-Schulte fail to teach luminescent silica gel particles wherein the silica gels have functional groups that can be coupled to streptavidin.

The Examiner refers to Kleiber, et al. for the teaching that aldehyde groups covalently couple with streptavidin (entire document, namely, column 3, lines 31-36).

Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art that aldehyde group on the luminescent silica gel particles of Walt, et al. in view of Muller-Schulte would be capable of coupling to streptavidin.

Claims 19, 21-23, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller-Schulte in view of Chen, et al. and Walt, et al. The Examiner argues in the Office action at pages 18-20 that Muller-Schulte teaches a method for producing magnetic SiO_2 particles comprising the steps of a) alkoxysilanes are dispersed in water, acid-catalytically hydrolyzed and condensed to form an SiO_2 hydrosol; b) a magnetic particle-sol mixture is produced by adding magnetic particles, for example, usual magnetic particles, magnetic colloids and/or ferrofluids to the SiO_2 hydrosol; c) dispensing the magnetic particle-sol mixture in an organic solvent which is immiscible with water; and d) adding a base to the magnetic particle-sol mixture during or after the dispersion in the organic solvent in order to form a gel (Abstract). The magnetic SiO_2 particles of Muller-Schulte can be used in a variety of biochemical applications, including magnetic separation assays (page 17 of machine translated document).

With respect to claim 21, the Examiner states that Muller-Schulte teaches a method, wherein the organic phase contains at least one surfactive substance in a concentration of 0.1 to 15% by volume (claims 40 and 43 of the translated document).

With respect to claim 22, the Examiner states that Muller-Schulte teaches a method, wherein the volume ratio of sol to organic phase is 1:5 to 1:30 (claim 45 of Muller-Schulte).

With respect to claim 23, the Examiner states that Muller-Schulte teaches a

method, wherein the dispersing and cross-linking steps have a duration of 2 to 5 seconds (claim 9 of Muller-Schulte).

With respect to claim 26, the Examiner states that Muller-Schulte teaches a method, wherein the ferro-magnetic substances added to the sol substance in an amount of 10-50% by weight (claim 37 of Muller-Schulte).

With respect to claim 27, the Examiner states that Muller-Schulte teaches a method, further including a step of mixing an aqueous solution of organic polymer, a polysaccharide or a protein in an amount of 1-20% by volume with the sol before the dispersing step (claims 61 and 64 of Muller-Schulte).

However, the Examiner acknowledges that Muller-Schulte fails to teach a method wherein at least one luminescent substance is mixed with clear silica gel. The Examiner refers to Chen, et al. for the teaching of a method of making optically transparent biomaterial using sol-gel encapsulation method in which fluorescent proteins such as phycobiliproteins are added to a silica gel (entire document, namely, page 1780, Methods). Moreover, the Examiner refers to Walt, et al. for the teaching that particles (beads) encoded with one or more reporter dyes exhibit characteristic (i.e., unique) optical signature to a reference analyte (entire document, namely, page 4, paragraph [0050]) and as a result the individual sensor elements of the array are conveniently decoded simultaneously in one simple measurement (page 4, paragraph [0050]). Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to include a step of mixing at least one luminescent substance with the clear silica sol of Muller-Schulte as taught by Chen, et al. in order to produce optically encoded silica

particles.

Claims 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of Muller-Schulte as applied to claim 15 and further in view of Kleiber, et al. and U.S. Patent No. 5,527,711 (Tom-Moy, et al.). The Examiner argues in the Office action (pages 20-22) that Walt, et al. in view of Muller-Schulte teach luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above), and that Walt, et al. further teaches that a variety of functional groups, such as aldehydes, can be attached to the particles for adding bioactive agents. However, the Examiner notes that Walt, et al. in view of Muller-Schulte fail to teach luminescent silica gel particles wherein the silica gels have functional groups that can be coupled to streptavidin.

The Examiner refers to Kleiber, et al for teaching that aldehyde groups covalently couple with streptavidin.

The Examiner refers to Tom-Moy, et al. for the teaching that avidin/streptavidin (column 4, lines 62-63) can be coupled to silica substrate, a biotinylated antibody can be attached to the avidin/streptavidin, and biotin can be added to block unoccupied active sites (entire document, namely, column 2, lines 20-37) and that this composite surface will bind tightly to antigen with minimal nonspecific absorption (column 2, lines 35-37). The Examiner therefore concludes that it would have been obvious to one of ordinary skill in the art to coat the surface of the luminescent silica gel particles of Walt, et al. in view of Muller-Schulte with streptavidin as taught by Tom-Moy in order to attach biotinylated antibody, which can bind tightly to an antigen of interest with minimal non-

specific absorption.

The Applicant respectfully submits that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all of the claim limitation. Applicant respectfully submits that one skilled in the art would have no suggestion or motivation to combine the aforementioned references in order to arrive at the presently claimed invention. Additionally, even if one skilled in the art were to consider any of the aforementioned combinations of references, each and every limitation of the present invention would not be disclosed, nor would there be a reasonable expectation of success if the aforementioned references were to be considered. Still further, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention (M.P.E.P. 2141.02 VI; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

The Applicant again disagrees with the Examiner's rejection for at least the numerous deficiencies of Walt, et al., which have been discussed at length above. The teachings of Chen, et al. fail to make up for any of the numerous deficiencies of Walt, et al. In particular, the subject matter of Chen, et al. refers to an optically transparent biomaterial product by encapsulating a light transparent protein in a silica-sol-gel matrix (page 1780, left column, second paragraph). In contrast to the particles of the present

invention which are luminescent silica gel particles, the material of Chen, et al. is a sol-gel-glass (page 1783 & summary) in which the biomaterial is encapsulated. In further contrast to the particles of the present invention, the silica-gel matrix is equipped with functional groups which are coupled with the biomolecules. As a glass according to Chen, et al., one skilled in the art would not have referred to the teaching therein for making the presently claimed invention obvious. Withdrawal thereof is respectfully requested.

Muller-Schulte also fails to make up for any of the deficiencies of Walt, et al., which are discussed above. For example, Muller-Schulte teaches a method for producing SiO_2 particles which are mixed with a magnetic colloid (page 11, line 20). In an embodiment of the present invention, the luminescent silica-gel particles are mixed with a known magnetic colloid. The result of this combination is a new medical preparation with enhanced properties. It is submitted that the combination of claim 18 opens new forms of highly efficient bio-arrays (page 11, line 4). Withdrawal thereof is respectfully requested.

Regarding the Examiner's position on claim 5, it is submitted that claim 5 recites that the concentration of the luminescent compound in the particles of the invention is in the range of 1% to 10% per rate. Such a range teaches those skilled in the art that the preferred optimum is higher than 1% and lower than 10%. It is submitted that such a range cannot be found by pure routine experimentation as this range is a preferred teaching for all particles. It is respectfully submitted that routine experimentation is only possible for single species. Moreover, paragraph [000057] of the specification provides

that "[c]oncentrations of 1-10% by weight of the marker substance are usually adequate to achieve a clear luminescence" which supports the criticality of this range.

Regarding the Examiner's position on claim 6, it is respectfully submitted that it has been disregarded that present claim 6 should be read in view of the primary claim and that every chemical compound has different emission frequencies. In other words, it is submitted that each of the dependent claims carry the limitations of the respective parent claim, and therefore they should be allowed in connection with the allowance of the respective parent claim.

Regarding the rejection of claim 7, the Applicant respectfully disagrees for at least the deficiencies of Walt, et al. and Chen, et al. discussed above. It is further submitted that Tijoe, et al. fails to make up for said numerous deficiencies of Walt, et al. and Chen, et al. Regarding present claim 7, it is submitted that the claim discloses that the present invention comprises at least one of the fluorescent compounds which should belong to the group wherein the excitation frequency is higher than the immission frequency, and that such a compound would be fluorescein. In particular, claim 7 is a preferred limitation for selecting the luminescent compound in the particles of the present invention. Therefore, because each and every feature of the present invention as recited in claim 7 is not taught or disclosed in Walt, et al. and Chen, et al. in view of Tijoe, et al., the Applicant submits that the reference does not render the present invention obvious. It is respectfully requested that this also rejection be withdrawn.

Regarding claim 18, the Applicant respectfully disagrees with the Examiner's

position for at least the deficiencies of Walt, et al. and Muller-Schulte, discussed above. Moreover, it is submitted that Kleiber, et al. fail to make-up for any of these deficiencies. In light of this, the combination of prior art fails to disclose every limitation of the present invention. Withdrawal of this rejection is respectfully requested.

The Applicant also disagrees with the Examiner's rejection of the present process claims in view of the cited prior art, in particular for at least the deficiencies of Muller-Schulte, Walt, et al. and Chen, et al. discussed above. Moreover, none of Muller-Schulte, Walt, et al. and Chen, et al. teach the inverse suspension method of the present invention, i.e., a mixture consisting of silica-gel sol and a luminescent compound being dispersed in an organic phase that is miscible in water and then polycondensed (specification, paragraph [000042]). This particular process allows for the preparation of the luminescent particles of the present invention. It is submitted that the cited prior art fails to teach or disclose the inverse suspension method of the present process claims. Therefore, the cited prior art fails to teach every limitation of the process claims and cannot be the basis of an obviousness rejection. Moreover, Tom-Moy, et al. fail to make up for the deficiencies of the prior art. Withdrawal of these rejections is respectfully requested.

In light of the aforementioned deficiencies of the combination of the teachings of cited prior art, the Applicant respectfully submits that the combination of references fails to teach every limitation set forth in the presently rejected claims and that due to these deficiencies, one skilled in the art would not have been motivated to combine these references to arrive at the present invention. Withdrawal of this rejection is strongly

requested.

Conclusion

In light of the foregoing claims and arguments, it is believed that the present application is in condition for allowance, and such action is earnestly solicited. The Examiner is invited to call the undersigned if there are any remaining issues to be discussed which could expedite the prosecution of the present application.

Respectfully submitted,

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